

## The Politics of Road Tolling in Zimbabwe

### ABSTRACT

Politics have a universal presence, as it affects our lives on a macro and micro level. The same can be said for road-tolling systems around the world. In Zimbabwe, road tolls were introduced to raise money for the rehabilitation, maintenance and construction of existing and new highway infrastructure. Politics helped steer the course in several ways. Many scholars have developed diverse and complementary definitions of the term ‘politics’. This article is underpinned by Lasswell’s (1936) definition of politics, namely “who gets what when and how”. As such, it focuses on the key actors or role-players in the road-tolling discourse (who), the services that they receive from the road-tolling system (what), at which times they receive these services (when), the strategies and routes used to access the services (how) and the reasons for accessing these services (why). Against this backdrop, this article seeks to explore the politics that surrounds Zimbabwe’s road-tolling processes and practice by using the ‘Lasswellian lens’ or ‘definitional framework’.

### INTRODUCTION

Tollgates play a crucial role in financing highway infrastructure construction and rehabilitation. Moreover, they have become policy instruments to raise additional revenue for the Government of Zimbabwe. Despite being a more viable long-term option, the mobilisation of domestic revenue was neglected for many years. The issue of toll roads was first discussed in 2000 after concerns were raised regarding the poor condition of Zimbabwe’s road infrastructure. Several incomplete road projects around the country further aggravated the situation (Zhou and Chilunjika 2013:199). Nonetheless, the proposal to introduce road-tolling systems was shelved until 2008. Two reasons for this was because the Government had embarked on its land reform programme which attracted intense opposition from the West, as well as the emerging voice of the country’s main political opposition – the Movement for Democratic Change (MDC). According to Biti (2015:9), Zimbabwe’s economy shrank significantly during this period, as Western powers had imposed sanctions to show their opposition to the land reform programme. Subsequently, Zimbabwe faced an increasingly severe economic crisis characterised by rapid hyperinflation and corresponding devaluation of the local currency. During this severe economic downturn, government coffers were depleted, and there was no surplus funds to support road maintenance (Zhou and Chilunjika 2013:193).

The period of hyperinflation from 2000 to early 2009 had a debilitating effect on the country’s economy (Chitiyo, Vines and Vandome 2016:9). While the Zimbabwean Government tried to still the West and opposition parties’ outcries regarding the land reform programme, it also faced the pressing issue of feeding and sustaining its

citizens. As such, it focused on providing essential goods and services such as healthcare, while the introduction of the road-tolling project took a backseat.

Before sanctions were imposed, road maintenance and infrastructure development depended on budgetary allocations and donor support by the World Bank (WB) and the International Monetary Fund (IMF), among others (Zhou and Chilunjika 2013:190). Due to their opposition to the land reform programme, donors pulled out from investing in Zimbabwe's road infrastructure in the early 2000s. During this time, government needed to step up to the plate as the country's road infrastructure needed urgent attention. The Government subsequently established the Zimbabwe National Roads Administration Fund (ZINARA), under the Roads Act No.18 of 2001. This parliamentary Act mandated ZINARA to mobilise funds to maintain the country's road network (ZINARA 2017:2; Zhou and Chilunjika 2013:189).

At the end of 2008, the country's Parliamentary Portfolio Committee on Transport and Infrastructural Development conducted an audit of ZINARA's operations, such as fuel levies, transit fees, overloading fines and abnormal load fees (ZINARA 2017:1; Zhou and Chilunjika 2013). After these revenue sources were found inadequate, the Government mandated ZINARA to bankroll the road-tolling project. Given the urgency of the project and ZINARA's capacity constraints, it had to engage the Zimbabwe Revenue Authority (ZIMRA) to administer and collect the toll revenue for the highway network investment (Zhou 2012:89).

According to Zhou and Chilunjika (2013:188), road tolling has become a new revenue source, as government revenue previously supported the construction and maintenance of roads. However, Dr Obert Mpofu, former Zimbabwean minister of transport observed that the road access and tolling fees could help supplement public funding for road infrastructure maintenance and construction without straining the national fiscus (Chideme 2013:1). While toll fees helped alleviate the burden of road maintenance and construction, revenue needs to be managed and monitored more efficiently to ensure transparency. In light of this and other related operational hiccups, it can be argued that road tolling is not insulated from politics.

Although we do not always realise it, our daily lives are interwoven with political decisions that can have widespread ramifications (Uwizeyimana 2011:95). In light of this, the article will commence with conceptualising the term 'road tolling'. Within this context, key definitions will be explained. Hereafter, the article will proceed to unpack different scholars' definitions of the term 'politics' and endeavour to contextualise them within the paradigm of Zimbabwean tolling practices. The article will examine the political processes that inform and undergird the tolling processes and practices in Zimbabwe, where after a critical analysis will be conducted of the road-tolling system in Zimbabwe by applying Lasswell's (1936) definitional framework of politics. To draw

critical conclusions, the article will synthesise salient issues associated with the politics of road-tolling in Zimbabwe.

## **CONCEPTUALISING ROAD TOLLING OR ROAD PRICING**

Ergas and Greig (2012:8) trace the origins of the concepts ‘road pricing’ or ‘road tolling’ back to Arthur Pigou’s 1920s book, *The Economics of Welfare*. Pigou argued that charges should be applied on roads to internalise external (outer) costs. From this perspective, it is important to clarify key terminology used in tolling discourse. According to the Connecticut Report (2009:4), the words ‘tolling’ and ‘pricing’, among others, are sometimes used interchangeably. However, they have taken on subtly different meanings in transportation discourse. As a general term, it refers to any direct client charge on highway and parkway transportation (National Cooperative Highway Research Programme (NCHRP) 2008:108; March 2007:23; Samuel 2005:9). In light of the above, Zhou and Chilunjika (2013:188) define ‘tollgates’ as privately or publicly built roads where a driver pays a toll (a fee) to use. As such, tollgates are a form of usage-based taxation levied on roads to support road construction and maintenance (Kirk 2017:12). Pickford and Blythe (2006:1) go on to state that tolling or toll collection helps mobilise road-use fees on certain roads, bridges or tunnels to recover all or part of the road’s capital, operation and maintenance costs. As such, road tolls are levied for specific admittance and infrastructure.

Tolling is an equitable method for road-users (motorists) to pay directly for using a particular road (Chilunjika 2018:41). On the other hand, road pricing entails using toll funds to accomplish a target or objective, such as alleviating traffic congestion (Sweet, Harrison and Kanaroglou 2015:78; Transport Research Centre 2007:14; Zupan and Perrotta 2003:106). Therefore, road pricing helps fund road infrastructure, manage transportation demand by reducing peak-hour travel and associated traffic congestion, as well as control external factors such as air pollution, greenhouse gas (GHG) emissions, visual intrusion, noise and road accidents (Johnson, Leicester and Stoye 2012:3).

Since its inception in Zimbabwe, the term ‘tolling’ has applied to parkway or highway transportation (Chilunjika 2018:41). Unlike pricing, its primary aim was not to realise targets, such as congestion relief and reliable traffic flows. Instead, tolling was implemented to charge motorists for road usage in order to raise revenue for road infrastructure development and maintenance in Zimbabwe (Pickford and Blythe 2006). While terms like ‘road pricing’ and ‘road charging’ can be used interchangeably with the term ‘tolling’, the current article uses the term ‘tolling’ for the sake of consistency (Chilunjika 2018:41).

Road tolling is a type of taxation that is used to recover costs associated with road infrastructure development and maintenance (Chilunjika 2018:41). Notably, this policy instrument can help achieve a government’s objectives

of investing in transport infrastructure (Chilunjika 2018:41). Within this context, it is also imperative to explore the related concept of value pricing. As a critical component of road pricing, it is used in developed countries where road pricing focuses on regulating travel behaviour and managing demand. Wachs (2003:137) defines the concept of value pricing as "...the use of prices, charges for travelling in order to produce needed revenue and simultaneously to influence travel behaviour so that travellers make decisions that use highways and systems more efficiently and more equitably".

People and goods pass networks at certain speeds. In this regard, demands for the road networks tend to peak if their use is not linked to the concept of value pricing (Wachs 2003:137). Yang and Huang (2005:5) state that in transport economies, demand can be measured by the number of journeys made, or in terms of the total distance of all journeys (e.g. passenger kilometres for a public transport or vehicle kilometres of travel for private transport). The general cost of travel, which includes both money and time expenditure, is used to measure the price of the goods (travel) (Chilunjika 2018:69). The effect of supply increases (capacity) is of particular interest in transport economics, as the potential environmental consequences are significant (De Jong and Gunn 2001:15 in Flyvbjerg 2005:522).

Roads facilitate economic activity, link communities and provide access to vital services. This justifies using public funds to pay for the construction and maintenance of roads. In this regard, road-user charges are in direct proportion to how often people travel (Chilunjika 2018:42). Thus, motorists are obliged to pay an amount that is proportionate to how often the service is used. Vickrey (1968:454) supports the need for setting a toll fee or a road price. The author highlights that a road becomes "worthless" precisely because it is free. Given this perspective, it can be argued that resources are wasted when road users are not charged for using the road. From an economics perspective, failing to charge road tolls can be seen as policy failure. Ergas and Greig (2012:56) go one step further to call it a form of market failure. The authors argue that a government controls a country's road network. As such, they have the power to levy charges and to determine the pricing of access to parts of the road network (Ergas and Greig 2012:56). In line with this, Levinson (1998:120) suggest that: "Road pricing is a necessary prerequisite to congestion pricing". Similarly, Pigou (1920) predicted that such charges would become necessary to deal with ever-increasing congested roads. Many economists regard road pricing as an instrument to optimise resource usage. Since tolls provide an on-going revenue source that is not tied to the annual government budgetary process, funds can channelled directly to the construction and maintenance of a particular road. This ensures that maintenance funds do not compete with the requirements of other roads in the network. Governments are legally bound by laws and statutes that provide specific guidelines on how to use toll fees.

The African Forum and Network on Debt and Development (AFRODAD) (2011:11) states that mobilising domestic resources through road tolls has become an important development issue. According to Ergas and Greig

(2012:78), the idea of road tolling is based on the theory that more road capacity attracts sufficient additional road usage to cancel out the congestion-alleviating effect of costly road-capacity increases. Commenting on the economics of tolling, contemporary scholars such as Hau (1991:12), Levinson and Kumar (1993:70), Denghai and Olsen (1998:15), Small, Winston and Yan (2002:42), Wu, David and Levinson (2004), Han and Yang (2008) Yang and Huang 2005, Rotaris, Danielis, Marcucci and Massiani, (2009:123), Peters, Kramer and Kress (2010), Ergas and Greig (2012:24) and Venter and Joubert (2013, 2014) contend that road tolling and pricing has proved to be a welfare-increasing policy. It is argued that, when used in conjunction with network-capacity provision, road tolling and pricing can contribute to the financial sustainability and cost-effectiveness of infrastructure investment (Ergas and Greig 2012:24 and Venter and Joubert 2013 2014). After exploring the economic underpinnings of road tolling or road pricing, it is imperative to capture the political dynamics of road tolling.

## **CONCEPTUALISING POLITICS**

Politics is a complex discipline with several critical dimensions. Hague and Harrop (2013) state that throughout the history of the discipline, political theorists and practitioners have offered multiple definitions of the term 'politics'. As such, it is difficult to provide an umbrella definition of the term (Uwizeyimana 2011:69). To overcome this challenge, it is advantageous to unpack some of the more noticeable and striking definitions of politics and see how they compare and relate to each other.

As a point of departure, Schmitter (2009:33) defines politics as a "science of government". As a scientific tool, politics is a systematic body of knowledge that deals with the governance, regulations, maintenance, development and defence and augmentation of the state. It also deals with protecting citizens' rights, safeguarding and enhancing moral values and ensuring that human relations are characterised by harmony and peace. Zimbabwe's road-tolling system is characterised by several role-players. From a regulatory perspective, Central Government is represented by the Ministry of Transport and Infrastructural Development and ZINARA. Regulations have been set on how ZINARA disburses money to specific road authorities. On an operational level, ZINARA is mandated to monitor the progress of road projects. According to Tamayao (2014), political scientists prefer to define the term 'politics' as the "art", rather than the "science" of government. It is regarded as an art form, as it requires exercising control or authority within society by creating and enforcing consensus. With this process, government skilfully addresses society's needs by carefully allocating benefits, rewards and penalties. Thus, it can be argued that politics is both the art and science of government (Uwizeyimana and Cloete 2013:50).

Politics is the process of making decisions that applies to all members of respective groups. Siddique (2017) argues that politics refers to organised control over a human community, which focuses on achieving and exercising positions of governance. Within the context of this article, decisions about road tolling are made by

policy-makers and ZINARA and apply to motorists, toll collectors and the management. In politics, a variety of methods are used to promote one's political views, such as coercing subjects, negotiation with other political subjects, making laws and exercising force. Within this context, Foed (2015) defines politics as a governing system where individuals or groups with different perspectives argue and challenge each other for the supreme good. At the heart of politics lies an understanding of the relationship between authorities and citizens and questioning how people perceive this authority. In addition to interacting with the toll collectors and motorists, ZINARA makes policies that regulate interactions with motorists, road authorities, management and toll collectors. The thrust of these interactions is to ensure that all role-players achieve their required services.

Easton (1965:21) defines politics as the authoritative allocation of resources. In this vein, Easton views 'politics' as human activity involved in the operation or functioning of the political system. As such, political activity is concerned with sound decision-making and action by a government, which spearheads the authoritative allocation of value-added goods in society. As such, the Estonian definition of politics focuses on government's authoritative decisions and how these decisions affect the allocation or distribution of rewards and values among the different segments of society (Heywood 2002:4). Within this context, values can be defined as any object, activity, idea, principle, goal or phenomenon that many individuals and groups within the political community consider to be good, desirable, attractive, useful, rewarding, beneficial or advantageous (Way n.d:1). The values can either be tangible or material (e.g., money, property or other economic goods, services and conditions) or intangible (i.e. symbolic, moral, ethical, ideological, cultural or religious) in nature (Way n.d:1).

Interactions are characterised by a legitimate authority or political power that is responsible for allocating positive and negative values to the society (Heywood 2002:4). When the provision of these goods and services are up to standard, it will bring about peace and prosperity in the country. Similarly, Dibia (n.d:1) asserts that politics focuses on how to harness societal good. Importantly, the emphasis is on public good, not on individual good. The Zimbabwean Government, through the ZINARA, should strive to allocate the required resources to road authorities, which have the enormous task of constructing, rehabilitating and maintaining the highway infrastructure. Undeniably, this will help provide value for money to the motoring public, as they have access to trafficable, top-quality roads. Way (n.d:1) argues that political discourse resonates around the distributive or allocative consequences of decision-making and governmental action to resolve questions and solve public problems. Thus, politics encompasses the various processes through which government responds to societal pressures by allocating benefits, rewards or penalties.

Also, politics can also be perceived as the pursuit and interplay of interests. Deutsch (1980:11 in Way (n.d.:1) defines politics primarily in terms of the pursuit and interplay of interests. As such, politics largely focuses on the pursuit of particular individuals or groups' interests. Moreover, it deals with the interplay of interests, which

centres on claiming and distributing rewards (e.g. values, things or relationships). In some cases, role-players in the Zimbabwean road-tolling discourse possess and pursue complementary interests. However, the opposite also rings true. ZINARA seeks to maximise its toll collections from the motorists, who in turn expect sound service delivery at tolling points. The motorists expect the tolling system to be fast and efficient in terms of vehicular processing. The maintenance of roads and related highway infrastructure is of equal importance.

The road authorities also expect ZINARA to respond to financial requirements. When resources are allocated to road authorities, ZINARA expects the allocated money to be used specifically for road construction, rehabilitation and maintenance. After toll collectors have collected toll revenues, they also expect to get paid by ZINARA at the end of each month. In similar vein, ZINARA expects toll collectors to collect the toll revenue from the motorists without any pilferage. Within this context, interested individuals and groups strive to further their special interests by making particular demands or claims on the entire political community. Accordingly, Boudreaux and Dwight (1997:367) argue that politically interested and active individuals and groups seek to influence governments' authoritative allocation of societal resources and values. Within this context, each group hopes to maximise, increase or prevent losing benefits, rewards and advantages. Likewise, they aim to minimise or prevent an increase in costs, benefits and deprivations. In light of this, role-players within the tolling discourse try to maximise their utility and express a certain degree of aversion to risk, costs and losses. Any decision that is made should strive to promote, uphold, maximise and increase their utility.

## **UNDERSTANDING THE POLITICS OF ROAD TOLLING**

Lasswell (1936) asserts that politics is concerned with official governmental decision-making and action. As such, the author defines politics as “who gets what when and how” (Lasswell 1936:1). However, the economic dimension to politics (the distribution of values and scarce resources), cannot be overlooked. As such, Sangale (2017) contends that politics is associated with production, distribution and resource usage. Tamayao (2014) adds that the definition underscores the reality of resource scarcity in society. While human needs and wants remain diverse, resources are always limited.

It remains challenging to allocate resources effectively, to determine what to produce, as well as how to distribute and use scarce resources (Heywood 2002:429). Within this context, Tamayao (2014) raises the following pertinent questions: “Who in the political society enjoys benefits, rewards and advantages?”, “What types of benefits and rewards are received?” and “How are these benefits distributed?” Tamayao (2014) adds to the governmental decision-making debate by focusing on citizens. Within this context, the author underscores the importance of determining who in society is denied what benefits, rewards and advantages; when and how long have they been denied benefits; and the methods used to subject them to such deprivations.

To understand the Lasswellian definition of politics, one must firstly deconstruct and explain the elements within this definitional framework. The statement, “who gets what”, refers to the actors or role-players associated with road tolling, as well as the nature and type of services they receive. The “when and how” denotes the time it takes for respective actors to access their services, as well as the methods or strategies that they use to access services. In light of this, the article identifies the government agencies, road authorities, toll collectors and the general populace (motorists) as the key role-players or tolling actors. To shed more light on this intricate process, the authors will explore key actors, the services received from toll roads, as well as the methods, strategies and approaches that connect role-players to the services required from the tolling systems.

### **The Government: The Zimbabwe National Roads Authority**

The Government, through ZINARA and the Ministry of Transport, is a key player in the Zimbabwean tolling discourse. As a Zimbabwean parastatal, ZINARA falls under the Ministry of Transport, Communication and Infrastructure Development. It was established in terms of the Roads Act of 2001 to enhance road network systems throughout Zimbabwe. ZINARA is responsible for the management, maintenance and development of Zimbabwe’s road network (Chilunjika 2018). In light of this, ZINARA’s vision and mission, as enshrined by the African Road Maintenance Fund Association (ARMFA) Focal Group Report (2011:1), is to become a world-class roads authority.

Key performance indicators include providing secure, stable and adequate reservoir of funds. Also, it is responsible for funding the maintenance of the national road network by fixing, collecting, disbursing and monitoring funds usage to preserve and enhance sustainable development. In addition, ZINARA is responsible for collecting, managing, administering and disbursing revenue that is used for the construction, maintenance and rehabilitation of Zimbabwe’s highway infrastructure. Within this regard, ZINARA receives funds from the motoring public who pay toll fees at the respective tolling points dotted through the country.

According to Chilunjika (2018:254), a general trend of shrinking budgetary allocations to the Ministry of Transport and Infrastructural Development saw highway infrastructure falling into disarray. This backlog in the maintenance and construction of the road infrastructure necessitated Government to adopt a revenue-generating instrument to fund road infrastructure without straining the national fiscus. Toll gates were introduced in 2009, and there are currently 36 tolling points situated between 15 to 20 kilometres from major cities and towns across Zimbabwe (out of the 36 tolling points, five are yet to be opened) (Matabvu 2018:1; Chilunjika 2018:3; Zhou and Chilunjika 2013:182). ZINARA currently collects toll revenue from the 31 tolling points, and the motoring public pay their toll fees at the toll gantries. Upon the completion of transaction, the boom gates open and motorists are



given free passage. Motorist who paid toll fees gain passage are allowed passage through the tolling points. Drivers are then issued with a receipt to serve as proof of payment. Toll fees are \$2 for light motor vehicles, while minibuses and buses pay \$3 and \$4, respectively, while haulage trucks are required to pay \$10 (Chilunjika 2018; Matabvu 2018:1).

The tolling points are installed with the state-of-the-art technology to process transactions. The Zimbabwean automated tolling systems also incorporate four major components, namely automated vehicle identification (AVI), automated vehicle classification (AVC), customer service or transaction processing and violation enforcement (VE) (Vats, Vats, Vaish and Kumara 2014: 444). These features help ensure that the toll facilities identify and record vehicles accurately and precisely as they pass through the toll collection points. In light of this, it can be argued that ZINARA is responsible for providing motorists with state-of-the-art technology that makes it easier for road tolling to take place without any delays and hassles.

When road tolls were established in 2009, structures were rudimentary and toll revenues were collected in the open (Zhou and Chilunjika 2013:189). In October 2013, ZINARA formed a joint venture with the South African construction company, Group Five. Through Infralink, quality roads were constructed, and state-of-the-art tolling technology was installed across Zimbabwe (Mugabe and Ruwende 2017:1). In this regard, it can be argued that ZINARA is responsible for creating a hassle-free environment where the motoring public can pay their toll fees without any delays. Automated toll roads enable quick and efficient transactions, which has increased vehicle-processing rates and toll revenue generation. During the manual tolling era, Musarurwa (2015:5) notes that unscrupulous tolling officers made a significant dent in the finances designated for the country's road fund.

The computerisation and automation of road-tolling systems and the widening of toll-collection points were meant to enhance the processing rates of vehicles, thereby eliminating unnecessary queues. However, ZINARA's migration from manual to automated tolling systems, peak-hour queues are still observed at tollgates along significant highways in Zimbabwe. Notably, information and communication technology (ICT) was introduced to bolster the vehicle processing rate and eliminate the pilferage associated with the manual tolling (Duve and Zachary 2015:6). Also, the road authorities introduced alternative untolled routes to help shorten queues. Unlike other systems across the globe where alternative untolled routes are provided, it was found that Zimbabwe's tolling system does not make provision for alternative untolled routes. As such, the country's tolling arrangement facilitates maximum toll revenue collection, as all vehicles are subject to toll fees. ZINARA, therefore, generates maximum toll revenues as their tolling model has a 100% charging rate as all the vehicles that pass through the tolling points are charged the required toll fees.

In October 2013, the computerisation of the country's tolling points marked the dawn of a new era. According to Chilunjika (2018:297), "...toll revenue yield shot up by almost +80% due to the computerisation and subsequent

takeover by ZINARA”. In October 2013, ZINARA collected US\$2 330 943, while US\$1 613 941 was collected in October 2012. Musarurwa (2015:5) highlights that computerisation helped curtail transgressions, as collections now takes place under the tight monitoring and surveillance of closed-circuit television (CCTV) cameras. Former acting chief executive officer (CEO) of ZINARA Moses Juma stated that, “The monthly toll revenue has increased by almost US\$1 million (from US\$1.2 million to about US\$2.1 million)” (Juma 2016:2). Furthermore, statistics indicate that US\$7 612 183 was collected between October and December 2013.

Undoubtedly, the computerisation process has yielded tangible results. Ruwende (2014) states that, since the computerisation of the tolling system, the Government collected US\$40 million annually in toll revenue. Moreover, a total of US\$200 million had been collected since the inception of the country’s tolling project (Mugabe 2016). However, the figure of US\$200 million falls far short of the country’s toll revenue requirements, as Zimbabwe needs a total of about US\$2.5 billion to rehabilitate its roads (Moyo 2016:1).

ZINARA receives a certain percentage of revenue from the motoring public in the form of toll fees, which should be channelled towards road infrastructure investment. However, some reports underscore the inadequacy of toll revenue to support highway infrastructure and maintenance requirements. Given this scenario, Moyo (2016:1) argues that the annual toll collections fail to meet road requirements. Nonetheless, there are some contestations on how mobilised revenue is channelled and used to fill other fiscal gaps.

According to Matabvu (2018:1), the main challenge is that of funding. The author argues that a minimum capital injection of US\$2 billion is needed to rehabilitate the existing road network, which excludes the construction of new roads (Matabvu 2018:1). ZINARA has been involved in negotiations with regional financial institutions to secure loans for funding the national road network. However, lines of credit for capital investments and donor funding have not been forthcoming. This leaves ZINARA in a challenging situation where it cannot meet the country’s road infrastructure requirements. Correspondingly, road authorities are not receiving adequate funding from ZINARA due to limited resources (ZINARA 2012:45).

The country’s road infrastructure development programme is not free of allegations of corruption. When the rigorous and meticulous process of assessing and comparing bids by potential suppliers is bypassed, tender procedures short-circuit. It opens the door for political interference, as is the case with ZINARA. It is alleged that public officials use their political influence to appoint loyalists to secure tenders. Moreover, it could leave room for collusion between service providers and ZINARA officials. It also introduce an element of coercion. Should service providers refuse to comply, they run the risk of losing future contracts.

Nyamukondiwa (2014:1) argues that, when toll-related tenders are not allocated according to procedure, revenue goes to waste or is misappropriated. For example, ZINARA is alleged to have acquired 40 graders at a cost of more than US\$8 million without going to tender (Langa and Manayiti 2017). As the graders were overpriced and acquired irregularly, there was a severe breach of corporate governance principles. Furthermore, there have been allegations that road fund revenue is misappropriated to support political campaigns. It was alleged that the former acting president, Phelekezela Mphoko, joined ranks with top ZINARA officials to fund Grace Mugabe's political rallies in 2014. According to Zhangazha, Mambo and Moyo (2016:1), Mphoko was drawn into the on-going corruption saga at ZINARA after ordering the release of the acting CEO, Moses Juma, and non-executive director David Norupiri. Juma and Norupiri were later arrested by the Zimbabwe Anti-Corruption Commission (ZACC) on allegations of defrauding the parastatals of US\$1.3 million. Mphoko later arrived in person at Avondale Police Station in Harare, where he secured the immediate release of Juma and Norupiri (Chidza, Mushava and Taruvinga 2016:1; Zhangazha et al. 2016:1). Such unwarranted levels of political interference hamper ZINARA's mandate of constructing and maintaining the country's roads despite collecting revenue from motorists for these purposes.

### **Road authorities**

The National Road Traffic Act Chapter [13:18] of 2000 states that Zimbabwe's road authorities are responsible for the planning, designing, construction, maintenance, rehabilitation and management of roads that fall within their jurisdiction. Zimbabwe's road authorities are divided into the following four categories: The Department of Roads (DOR) is responsible for all state highways, while Urban Councils (UCs) (municipalities) are charged with maintaining roads that fall under their jurisdiction. In turn, the District Development Fund (DDF) is charged with establishing all-weather road access throughout the rural areas of Zimbabwe and managing activities in Rural District Councils (RDCs) (ZINARA 2012:7).

The success of a tolling system is premised on the adequacy of toll-collection system, as well as the implementation of funds. In line with this, ZINARA plays a crucial role in road authorities' functioning. It is responsible for the disbursement and allocation of funds to all four categories for the construction, refurbishment and maintenance of the national road network. The revenue allocated to respective road authorities determines the rate of fixing roads. The disbursement and allocation of funds can be based on any one of the following criteria:

- A fundamental percentage split of the total funds available among roads of different classes (which is informed by acquittals).
- A formulation which takes into account the class of the road, its length, width, surface type and the traffic levels on the road.

- Identified needs based on the condition of the road network and nature of maintenance work to be carried out (ZINARA 2012; Mbara, Nyarirangwe and Mukwashi 2010:24; Gumbie and Kudenga 2009:24).

After disbursements have been made, the road authorities are expected to perform routine and periodic maintenance on the road network in their respective jurisdictions. According to ZINARA's Company History (2016) routine maintenance includes instances where councils are given funds for cutting grass, patching potholes, cleaning drainage, clearance and grading. While substantial resources are required for periodic maintenance, it takes place in three- to five-year intervals. Thus, ZINARA has ample time to mobilise revenue for the rehabilitation of roads and similar activities.

The current fund-distribution framework to local authorities is on an acquittal basis. Local authorities are required to submit requisitions to the road fund that outline proposed road projects within their respective jurisdictional areas. These acquittals should specify and justify all the proposed expenditure items. After an in-depth analysis of the requisitions, ZINARA then disburses funds to respective local authorities (Chilunjika 2018:198). However, this technical exercise sees many proposals being rejected. In addition to ZINARA's stringent requirements, many local authorities fail to forward proposals to ZINARA. Subsequently, disbursements to road authorities remain low and local authorities' road infrastructure continue to deteriorate. This is especially the case with urban and rural councils, where late submissions of acquittals undermine further disbursements to the councils.

The 2017 National Budget (2016:73), argued that local authorities have failed to capitalise on ZINARA's road maintenance resources. A lack of capacity to prepare documents, as well as a failure to account for prior disbursements were highlighted as the reasons for the state of affairs (National Budget 2016:73). Local authorities' failure to draft convincing work documents are further compounded by allegations of corruption and abuse of funds. According to Matabvu (2018:2), local authorities have been diverting ZINARA's funds for other uses. This undoubtedly erodes the limited revenue that is available to rehabilitate the country's road network. As such, disbursed funds have made little impact over the years,

The rehabilitation and development of the country's road network continues to be hampered by inadequate financial resources and skilled personnel. Due to challenges relating to securing and using toll revenue, allocations to local authorities fall far below the required level to complete road construction and rehabilitation. The issue is exacerbated by a growth in road traffic volumes since the country's economy started to stabilise in 2009. Chilunjika (2018:295) argues that this further compromises road safety and provision of efficient transport services.

## **Toll collectors**

When toll roads were first introduced in 2009, 22 toll points were established on all the regional trunk roads throughout the country. The most basic version of the MTC system was introduced, which consisted of lane markings, demarcated by 705mm plastic cones, a resting tent and a makeshift office and toll collectors who collected fees from motorists. During the early stage, no toll booths were constructed at the toll sites (Mbara et al. 2010:13). According to Juma (2015:10), toll fees were collected in the open at gazetted tolling points. This was hazardous to collectors, as they ran the risk of being run over by motorists who wanted to evade payment. The labour-based collection process also led to fatigue-related challenges.

According to Zhou and Chilunjika (2013:199-200), the country's fledgling tolling system faced the following challenges:

- Issuing change was problem, especially during changes in shifts. As a result, vehicles parked next to the booths while waiting for change.
- Revenue was lost during heavy rainstorms. As rudimentary structures did not provide adequate shelter against the weather, toll officials abandoned the toll gates leaving vehicles to pass through without paying.
- As there were no proper monitoring systems, the vehicle type that passed through the toll booth could not be determined — this created irregularities between the collected fees and the vehicle types.

According to Juma (2015:10), before the computerisation of Zimbabwe's tolling system, the enforcement of collection fees was inefficient. Moreover, it was characterised by fraudulent activity (ZINARA 2014:10). There were many loopholes, which led to regular pilferage and severe revenue losses. For example, motorists could pass tolling points without paying, or toll collectors could use one receipt for two vehicles (Zhou and Chilunjika 2013; ZINARA 2014:10). This lack of control made it difficult to ascertain the actual vehicle population. Moreover, no reporting structures were in place, which was exacerbated by limited and difficult auditing and poor working conditions (Chilunjika 2018:110). Since it was challenging to compile and reconcile data, it was almost impossible to audit the manual system (Chilunjika 2018:110).

When ZINARA was mandated to collect fees independently, it designed new workflow procedures and documentation that streamlined the process (Chilunjika 2018:110; Juma 2015:12). Toll plazas were constructed and computerised, and some electronic features were implemented (Chilunjika 2018:110). High-tech additions like smart power solutions, automatic number-plate recognition (ANPR) technology, CCTV with live-streaming and radio-frequency identification (RFID) were adopted and operationalised (ZINARA 2014:12). The introduction of automated tolling systems improved general cash collection, vehicle and transaction control, auditing and enforcement. Now toll collectors work in well-built, air-conditioned cubicles, while computer-generated tickets are issued to motorists who have paid their toll fees.

The introduction of automated toll collection has enhanced transparency and accountability. To curb fraudulent activity, ZINARA has fiscalised transactions at tolling points. As all transactions can now be tracked, pilferage and revenue leakages are minimised (Chilunjika 2018:269). For example, toll have to reconcile collected fees with the recorded number of vehicles before leaving their shifts (Chilunjika 2018:269).

The original arrangement was that toll collectors made their collections without close supervision. They were only accountable to ZIMRA accountants. However, these accountants doubled as toll managers and hardly visited the tolling points (Zhou and Chilunjika 2013:191). Accordingly, they relied heavily on collectors' collection figures. Given such an arrangement, the toll collectors had more room to embezzle toll fees (Chilunjika 2018:270). In a bid to curb toll revenue leakages, armed Zimbabwe Republic Police (ZRP) officers were called in to curb corruption and fraudulent activities among toll collectors (Chilunjika 2018:270). At the end of toll collectors' shifts, police officers do physical checks to ensure that everything is in order (Chilunjika 2018:270). The toll collectors are also required to declare any money that they bring to the toll station. Also, they are required to leave all their belongings (mobile phones, wallets and money) in their lockers (Chilunjika 218:270). Members of the ZRP also protect tollbooths from armed robbers and potential toll evaders (Chilunjika 218:270).

### **General public and motorists**

Where toll fees are paid, motorists and the general public expect quality roads. Motorists can only be satisfied by visible and meaningful developments and improvements on highway infrastructure (Chilunjika 2018:305). As such, toll revenue should be used to construct, maintain and rehabilitate road networks. According to Ndlovu (2015), ZINARA has made visible efforts to rehabilitate the Harare-Plumtree Road, as well as other related projects. The state-of-the-art Plumtree-Harare-Mutare Highway is regarded as an example of road-tolling as a reliable revenue source for road infrastructure construction and maintenance (Chilunjika 2018:302). Given this initiative to construct the highway, it can be argued that the motorists are aware that tolling systems have a high potential to raise public revenue for investment in road networks. (Chilunjika 2018:302).

Mbara et al. (2010:629) state that it will be difficult to divert funds collected through toll charges. The authors argue that the toll revenue does not measure up to the growing need to improve the road network and mounting pressure to meet the motoring public's expectations (Mbara et al. 2010:629). In similar vein, Chilunjika (2018:305) argues that the revenue collected from these tolling systems is so minute concerning the road network requirements that any divergence would jeopardise the road construction efforts.

### **THE AFTERMATH OF NOT FOLLOWING A WELL-PLANNED APPROACH**

According to Ergas and Greig (2012:56), it is common practice that planners and researchers conduct feasibility studies on the viability of road-tolling systems. Muzaale and Uwizeyimana (2016:73) underscore the importance of consultations with key stakeholders (users and decision-makers) before implementation. Rotaris et al. (2009:17) state that a well-functioning toll-planning process is characterised by informed participants who are willing to play an active role in the process. To create a sense of ownership, public officials (policy-makers and ZINARA officials) should provide the public with the reasons for, and benefits of, introducing toll roads (Chilunjika 2018:6). If motorists acknowledge that tolling is for their benefit as it leads to better infrastructure, they become more positive towards the system (Chilunjika 2018:304).

The Zimbabwean system is unique, in the sense that it was implemented without consulting key stakeholders, such as motorists and other related organisations. Also, no feasibility studies were conducted before the operationalisation of the tolling project (Chilunjika 2018:6). Furthermore, no standard regular or rational approach was followed, such as providing alternative routes, standard distances between tolling points, rational determination of the toll fees and traffic volumes (Chilunjika 2018:6).

Failure to involve users in the planning process could lead to a lack of support. Deficient public backing (a product of a dearth in political acceptability) for e-tolling has been the most crucial impediment to the full implementation of tolling schemes (Kalauskas, Taylor and Iseki 2009; Bowerman 2007; Schade and Schlag 2000; Guillianio 1991). A lack of citizen backing stems from fears that tolling will have negative financial implications. As such, successful tolling projects should be grounded in sound political acceptability (Chilunjika 2018:238). According to Twitchen (2014:1), political accountability refers to the decision-makers' (formal and informal actors) attitudes to the toll projects. Also, it reflects popular perceptions and the distribution of political power (Van der Waladt & Du Toit 1999:256).

Zimbabwe has a history of public funds being extracted from the general population under pretext of government policies and programmes. Within this context, the article argues that the general population views toll road policy with great suspicion. Citizens question the implementation of toll revenue, as there is no visible improvement in the quality of the country's road infrastructure (Chilunjika 2018:304). Chilunjika 2018:195 argues that, "Motorists and the general populace are highly disgruntled with the tolling system probably because there is no transparency on the usage of the revenues that have been collected. There is no visible investment in road infrastructure; the highway continues to be fractured, and potholes are in certain circumstances are being seen along the major road network".

Furthermore, motorists fears that toll fees could be just another government ploy to raise funds under false pretexts, as was the case with the AIDS Levy and the Drought Relief Fund (Chilunjika 2018:304). Bhat, Kilmarx,

Dube, Manenji, Dube and Magure (2016:7) argue that, “History repeats itself since the same Government that led to the abuse of the AIDS levy cannot be trusted with the toll fees given the economic hardships that the country is currently facing. If they did it before they can, in the same way, divert the toll road funds from the intended purposes”. Correspondingly, Mbara et al. (2010:627) contend that, for most people, the introduction of the road-tolling scheme is just a way of milking money from motorists under the guise of funding road maintenance.

In light of this, it can be noted that there are no tangible developments on the road network. As such, there is a departure from the intended purpose of the tolling systems, which is to mobilise revenue for the construction and rehabilitation of the road network. Although motorists are paying toll fees, there are no extensive upgrades and refurbishments of road networks. As such, motorists feel short-changed by Government. There needs to be a balance between the toll fees motorists pay and the resultant road infrastructure investments. That way, motorists will be satisfied that toll fees are being put to good use.

The Zimbabwean tolling system is built in such a way that it does not provide alternative routes for the motorists. Equity becomes an issue, as it limits the mobility of motorists who cannot afford to pay the toll fees. Accordingly, Twitchen (2014:2) states that providing untolled alternative routes helps give motorists the choice to travel on well-maintained, shorter tolled routes or travel on longer, untolled routes. According to the author, “Failure to provide alternative untolled routes raises equity issues, as the assumption created by this kind of an arrangement is that all motorists have equal access to financial resources” (Twitchen 2014:2). Also, motorists from different income groups are charged the same toll fees, which imposes a more substantial burden on low-income earners. Littman (2011:3) argues that providing alternative untolled routes lessens the financial burden on low-income earners, as they have the option of using untolled routes. Failure to provide the motorists with alternative untolled routes often leads to resistance, which ultimately forces tolling projects to fizzle out.

Provisions have been made for occasional visitors, out-of-towners and government vehicles. According to Chilunjika (2018:187), “Some vehicles are exempted from paying some toll fees and also given special discounts, which serve as provisions to accommodate state-owned vehicles and those who stay very close to the tolling facility”. Exemptions are also extended to people with disabilities upon providing full evidence at the Central Vehicle Registry (CVR) that the vehicle is registered in their name. Discounts are also awarded to out-of-towners who pay a flat rate every month. In substantiating the need for discounts, Kjerkreit and Odeck (2005:13) postulate that support for a road-tolling system could be gained by giving the most frequent travellers discounted fees regardless of their proximity to the tolling point. If this were the case in the Zimbabwean context, Chilunjika (2018:267) argues that only frequent users who do not stay within the 10km radius would benefit



The Zimbabwean model make provision for frequent motorists who reside near toll facilities rather than the general bracket of frequent motorists (Chilunjika 2018:268). To support this point, Chilunjika (2018:268) argues that, “Discounts and exemptions are incentives that can stimulate the motorists to support a particular tolling system”. Notably, these provisions consider equity issues, as different charges are afforded to different motorists depending on factors such as disabilities, frequency of road use and proximity to the facility. In line with this, Prud’homme and Bocarejo (2005:35) state that the major reason for exemptions and discounts, particularly in the case of London, was to gain acceptance. However, exemptions can only help gain acceptance if motorists do not resist the tolling system by trying to avoid paying fees and that they instead support the road tolling system. In addition, occasional visitors from other countries are not given special treatment. They pay the same toll fees as local motorists that fall within category or vehicle class (Chilunjika 2018:268).

## **CONCLUSION**

The article examined the politics surrounding road tolling in Zimbabwe. To provide perspective, it commenced by tracing the historical development of road tolling in Zimbabwe. Hereafter, the conceptual issues surrounding the tolling processes were unpacked. The article examined the different definitions of politics from key and prominent scholars. Lasswell’s (1936) definition of politics, namely “who gets what when and how”, was used to determine the actors or role players that are associated with Zimbabwe’s road tolling process, as well as the nature and type of services that are rendered. It was found that the statements, “when and how”, associated with Lasswell’s definition denote the given time when respective actors access services, as well as the processes, methods or strategies, used access those services.

From Lasswell’s (1936) perspective, this article found that tolling serve different functions to different groups in society. Governments may perceive tolling as an instrument to increase social welfare and government revenue, while motorists might view road tolling as a means to improve road infrastructure. Tolling hits low-income groups the hardest and also has the potential to induce a form of inequity. Additionally, it might lead to regional inequality, since the charge is to be paid in tolled areas. Given that some routes have more tolling points than others, the tolling burden is more substantial in some areas than others.

ZINARA expects toll collectors to follow ethical procedures when collecting toll fees. In turn, toll collectors expect to receive payment at the end of the month. In similar vein, road authorities can access funds through ZINARA’s acquittal processes to construct, maintain and rehabilitate road networks in their respective jurisdictions. In this regard, ZINARA has plays an oversight role, as it monitors respective road authorities to ensure that funds are used for the intended purposes.

The interests of the groups mentioned above differ vastly. The allocation of goods and services among ZINARA, road authorities, toll collectors and the motoring public can be contradictory and conflicting. The Government's decisions and actions further the interests of some groups, while side-lining the interests of others. This is reflected in Lasswell's (1936) definition of politics. They are striking a balance between "who gets what when and how" is one of careful consideration and meted political will. Undeniably, the equitable allocation of public goods and services between and among key actors in the Zimbabwean tolling discourse is of importance. Equally so, key actors should strive to develop Zimbabwe's highway road infrastructure.

#### **NOTE:**

\*This article is partly based on a Doctoral Thesis completed at the University of Johannesburg under the supervision of Prof D E Uwizeyimana and co-supervision of Prof C.J. Auriacombe: Chilunjika, A. 2018. "The performance of automated toll revenue mobilisation systems in Zimbabwe". Johannesburg: University of Johannesburg.

#### **References**

- African Forum and Network on Debt and Development (AFRODAD). 2011. *What has Tax got to do with Development: A Critical Look at Mozambique's Tax Systems?* Harare: AFRODAD.
- African Roads Maintenance Fund Association (ARMFA) Focal Group Report. 2011. Country Reports and Discussions. Available at: <https://www.armfa.org>. (Accessed on 21 October 2018).
- Bhat, N., Kilmarx, P.H., Dube, F., Manenji, A., Dube, M. and Magure, T. 2016. Zimbabwe's National AIDS Levy: A Case Study. *Sahara Journal*. 13 (2): pp 13-58.
- Biti, T.L. 2015. Mugabe Govt Clueless on Economy. *News Day*. 23 February 2015.
- Boudreaux, D.J. and Dwight, R.L. 1997. Politics as the Art of Confined Compromise. *Cato Journal*. 16(3): 365-380.
- Bowerman, A. 2007. *The Costs and Benefits of Road Pricing comparing Nationwide Charging with Project-based Schemes*. London: Institute of Economic Affairs.
- Chideme, M. 2013. Zimbabwe's First Toll Plaza was commissioned. *The Herald*. 10 April 2013.
- Chidza, R., Mushava, E. and Taruvinga, M. 2016. VP Mphoko sucked into ZINARA Storm. *Newsday*. 12 May 2016.

- Chilunjika, A. 2018. *The Performance of Automated Toll Revenue Mobilisation Systems in Zimbabwe*. Unpublished Doctoral Thesis. Johannesburg: University of Johannesburg.
- Chitiyo, K., Vines, A. and Vandome, C. 2016. *The Domestic and External Implications of Zimbabwe's Economic Reform and Re-engagement Agenda*. London: Chatham House, The Royal Institute of International Affairs.
- Company History Zimbabwe National Roads Administration (ZINARA). 2016. Available at: <https://www.zinara.co.zw>. (Accessed on 25 August 2018).
- Connecticut Report. 2009. *Connecticut Electronic Tolling and Congestion Pricing Study Final Report*. Connecticut: Cambridge Systematics Inc.
- DeJong, G and Gunn, H. 2001. Recent Evidence on Car Cost and Time Elasticities of Travel Demand in Europe. *Journal of Transport Economics and Policy*. April 2001. 36(2): 26.
- Denghai, Y. and Olsen, W. 1998. *Potential Pitfalls in Forecasting Travel Demand for Toll Roads: Experience in the US and Overseas*. Oklahoma: TRB.
- Deutsch, K. 1980. *Politics and Government - How People Decide their Fate*. Boston: MA: Houghton Mifflin.
- Dibia, O. n.d. What is Politics? Available at: <https://www.gamji.com>. (Accessed on 25 August 2018).
- Duve, R. and Tambudzai, Z. 2015. Impact of ICT on Service Management in Zimbabwean Public Sector: A Case of ZINARA. *Paper presented at the Midlands State University 1<sup>st</sup> International Research Conference: Driving Socio-Economic Development through Value-Addition and Sustainable Use of Resources*. Elephant Hills Resort. Victoria Falls: International Research.
- Easton, D. 1965. *A Systems Analysis of Political Life*. New York, NY: John Wiley & Sons.
- Ergas, H and Greig, D. 2012. *Pricing Congestion in Sydney ACIL*. Tasman: University of Wollongong.
- Flyvbjerg, B. 2005. Good Practice Lessons from Urban Traffic Project, Denmark. *Presented at the Conference on Good Practice in Integration of Environment into Transport Policy*. Brussels: European Commission.
- Foed, D. 2015. Defining Politics. Available at: <https://www.dataquest.com>. (Accessed on 15 October 2018).
- Guilliano, K. 1991. *Africa Infrastructure Country Diagnostic: Roads in Sub-Saharan Africa*. Washington DC: World Bank.
- Gildenhuys, J.S.H. 1999. *Introduction to the Management of Public Finance: A South African Perspective*. Goodwood: JL van Schaik Academics.

- Gumbie, M.E. and Kudenga, N. 2009. Rehabilitation of Zimbabwe's Surfaced Road Network. *Paper presented at the Institute of Engineers*. Harare: Institute of Engineers Press.
- Hague, R. and Harrop, M. 2013. *Comparative Government and Politics: An Introduction*. London: MacMillan International Higher Education.
- Han, D., and Yang, H. 2008. The multi-class, multi-criterion traffic equilibrium and the efficiency of congestion pricing. *Transportation Research Part E*. May 2008. 44(5): 753–773.
- Hau, T.D. 1991. *Congestion Charging Mechanisms for Roads: An Evaluation of Current Practice*. Washington DC: World Bank Press.
- Heywood, A. 2002. *Politics* (2<sup>nd</sup> Ed.). London: Palgrave Foundation.
- Johnson, P., Leicester, A. and Stoye, G. 2012. *Fuel for Thought: The what, why and how of Motoring Taxation*. London: RAC Foundation.
- Juma, M. 2016. ZINARA boss lands top African post. Available at: <https://www.herald.co.zw/zinara-boss-lands-top-african-post/>. (Accessed on 20 May 2018).
- Juma, M.J. 2015 *Best Practices in Tolling (The Zimbabwean Case)*. Victoria Falls: ARMFA Annual General Meeting.
- Kalauskas, R., Taylor, B.D. and Iseki, H. 2009. *Task A-2 Implementation and Management of Electronic Roadway Tolling: Lessons from Successful Cases*. California: UCB-ITS-PRR Press.
- Kirk, R., S. 2017. Funding and Financing Highways and Public Transportation. *Congressional Research Services*. March 2016. 9(4).
- Kjerkreit, A. and Odeck, J. 2005. Users' Attitudes towards Toll roads: A Cross-Section Assessment. *Piarc Seminar on Road Pricing with Emphasis on Financing, Regulation and Equity*. Cancun, PIARC Seminar. <https://www.piarc.org/ressources/documents>. The World Road Association Press.
- Langa, V. and Manayiti, O. 2017. How ZINARA Bosses were Let off the Hook. *The Standard*. 23 July 2017.
- Lasswell, H. 1936. *Politics: Who Gets What, When, How?* New York: McGraw-Hill Book Co.
- Levinson, D. 1998. *Road Pricing and Compensation for Delay*. Washington DC: Transportation Research Board.
- Levinson, D. and Kumar, A. 1993. Integrating Feedback into Transportation Planning Model: Structure and Application. *Transportation Research Record*. 1413. Washington DC: National Research Council, pp. 70–77.

- Littman, T. 2011. *Using Road Pricing Revenue: Economic Efficiency and Equity Considerations*. Victoria: Transport Policy Institute.
- March, J.W. 2007. *Case Studies of Public-Private Partnerships for Transportation Projects in the United States of America. Task Order 05-002*. Washington DC: Federal Highway Administration (FHWA).
- Massiani, P. 2009. *E-Toll Mess may Haunt Gauteng's Bid for Private Money*. Pretoria: South African Roads Agency Ltd. (SANRAL).
- Matabvu, D. 2018. Five more Toll Gates for Highways. *Sunday News*. 16 September 2018.
- Mbara, T.C., Nyarirangwe, M. and Mukwashi, T. 2010. *Paying for Road Access in Zimbabwe: Addressing Traffic Management Issues or Raising Revenue for the Fiscus?* Pretoria: Document Transformation Technologies.
- Moyo, H. 2016. SADC States plan Highway to Bypass Zimbabwe. *The Herald*. 24 March 2016.
- Mugabe, T. 2016. ZINARA Pays S.A. Tycoon US\$ 300k Monthly. *NewsDay*. 31 August 2016.
- Mugabe, T. and Ruwende, I. 2017. Toll Fees Inadequate for Road Rehabilitation. *The Herald*. 13 February 2017.
- Musarurwa, D. 2015. Tollgate Leakages Plugged. *The Sunday Mail*. 1 March 2015.
- Muzaale, T. & Uwizeyimana, D.E. 2016. Adherence to the Public Participation Principle in Oil Exploration and Production in Uganda: An Exploratory Case. *Administratio Publica*. 24(2): 73-95.
- National Cooperative Highway Research Programme (NCHRP). 2008. *Compilation of Public Opinion Data on Tolls and Road Pricing: A Synthesis of Highway Practice*. Washington D.C.: NCHRP.
- Ndlovu, P. 2015. Plumtree-Mutare Highway Commissioning Next Month. *Chronicle*. 10 April 2015.
- Nyamukondiwa, W. 2014. ZINARA Projects on Course. *The Herald*. 1 November 2014.
- Peters, J.R., Kramer, J.K. and Kress, M.E. 2010. *Transitioning Barrier Toll Collection Systems to Open Road Tolling: Flow and Management Issues*. Illinois: Transport Research Board.
- Pickford, A.T.W. and Blythe, P.T. 2006 *Road User Charging and Electronic Toll Collection*. London: Artech.
- Pigou, A. 1920. *The Economics of Welfare*. London: MacMillan and Co. Ltd.
- Prud'homme, R., and Bocarejo, J.P. 2005. The London Congestion Charge: A Tentative Economic Appraisal. *Transport Policy*. August 2005. 12(3): 279-287.
- Roads Act No. 18 of 2001. Harare: Government Publishers.

- Rotaris, L., Danielis, R., Marcucci, E. and Massiani, J. 2009. *The Pricing Scheme to Curb Pollution in Milan: A Preliminary Assessment Working Paper 122*. Di Trieste: Universita Degli Studi.
- Ruwende, I. 2014. Toll Fees Go Up. *The Herald*. 14 June 2014.
- Samuel, P. 2005. *Should States Sell Their Toll Roads?* New York: Reason Foundation.
- Sangale, Y. 2017. *Political Science from Savitrabai*. Phule: Pune University.
- Schade, J. and Schlag, B. 2000. *Acceptability of Urban Transport Pricing*. Helsinki: Government Institute for Economic Research.
- Schmitter, P.C. 2009. The Nature and Future of Comparative Politics. *European Political Science Review*. 1(1): 33-61.
- Siddique, F. 2017. What is Politics? Available at: <https://www.quora.com>. (Accessed 15 October 2018).
- Sithole, S. 2014. Toll Fees inadequate for toll road Rehabilitation. *The Herald*. 27 June 2014.
- Small, K.A. Winston, C. and Yan, J. 2002. *Uncovering the Distribution of Motorist Preferences for Travel Time and Reliability: Implications for Road Pricing*. Berkeley: University of California Transportation Centre.
- Sweet, M., Harrison, C., and Kanaroglou, A. 2015. *Congestion Trends in the City of Toronto: 2011-2014*. Ontario: McMaster Institute for Transportation and Logistics.
- Tamayao, M.J.M. 2014. Introduction to Politics. Available at: <https://tamayaosbc.wordpress.com/2014/08/21/introduction-to-politics-2/> (Accessed on 26 August 2018).
- The 2017 National Budget Statement. 2016. *Building a Conducive Environment that attracts Foreign Direct Investment*. Harare: Printflow.
- The National Road Traffic Act Chapter 13:18 of 2000. Harare: Printflow.
- Transport Research Centre. 2007. *Managing Urban Traffic Congestion*. New York: ECTM.
- Twitchen, J. 2014. Politics and Policy: Acceptance and Acceptability: Where are the Distinctions? *Infrastructure Intelligence*, April 2014. 5(2).
- Uwizeyimana, DE. 2011. The effects of party-political interests on policy implementation effectiveness: Low-cost housing allocation in Cape Town-UniCity, 1994-2008. Unpublished PhD thesis. Johannesburg: University of Johannesburg.

- Uwizeyimana, D.E. & Cloete F. 2013. Political interests, affiliation and service delivery in the UniCity of Cape Town. *Politeia*. 32(3):40-75.
- Van der Walddt, G. & Du Toit, D.F.P. 1999. *Managing for Excellence in the Public Service*. Kenwyn: Juta.
- Vats, S., Vats, B. Vaish, R. & Kumara, V. 2014. Selection of optimal electronic toll collection system for India: A subjective-fuzzy decision-making approach. *Applied Soft Computing*. 5 (21): 444-45.
- Venter, C.J. and Joubert, J.W. 2013. *Using Multi-source GPS Data to Characterize Multiday Driving Patterns and Fuel Use in a Large Urban Region*. Washington D.C: Transportation Research Record.
- Vickrey, W. S. 1968. Congestion Theory and Transport Investment. *American Economic Review*. November 59(1): 251-260.
- Wachs, M. 2003. *Presentation on Value Pricing for Transportation*. Washington DC: Washington Metropolitan Council of Governments.
- Way, A.L. n.d. The American System of Government: Government and Politics in the U.S.A. *Political Science*. 201 (5).
- Wu, Y., David, G, and Levinson, D. 2004. *Improving the Estimation of Travel Demand for Traffic Simulation: Part II*. Minneapolis: University of Minnesota.
- Yang, H and Huang, H-J. 2005. *Mathematical and Economic Theory of Road Pricing*. Amsterdam: Elsevier.
- Zhangazha, W., Mambo, E. and Moyo, H. 2016. Mphoko Releases Arrested Officials. *Zimbabwe Independent*. 15 July 2016.
- Zhou, G. 2012. Systems, Processes and Challenges of Public Revenue Collection in Zimbabwe. *International Journal of Contemporary Research*. March. 3(2).
- Zhou, G and Chilunjika, A. 2013. Mobilising Domestic Revenue through Toll Gate Systems in Zimbabwe. *International Journal of Business and Social Sciences*. April. 4(3): 188-204.
- ZINARA. 2012. *Toll Road Construction*. Harare: ZINARA Bulletin.
- ZINARA. 2014. *ZINARA Power Point Presentation*. Harare: ZINARA.
- ZINARA. 2016. Rehabilitation of the Plumtree-Harare-Mutare Highway. *ZINARA Bulletin*.
- ZINARA's Company History. 2016. Rehabilitation of the Major Highways. *ZINARA Bulletin*.
- ZINARA Bulletin. 2017. *Toll Roads*. Harare: ZINARA.

Zupan, J.M. and Perrotta, A.F. 2003. *An Exploration of Motor Vehicle Congestion Pricing in New York*. New York: Regional Plan Association.